

the room produced shortness of breath and increased rapidity of heart action. During this time she was occasionally carried up and down stairs, and some months later was strong enough to take automobile drives. After four or five months of treatment her heart had sufficiently recovered for her to walk up and down stairs once a day. She has steadily improved in strength, so that at the present time she leads practically a normal life and presents the appearance of being in perfect health.

The physical signs so far as the lungs are concerned persist. The right diaphragm is in the same position as above described. An examination of the heart still shows a systolic murmur, which is loudest at the apex. This murmur, however, is now soft and very much diminished in intensity, and in the range of its transmission. It is my belief that at the present time the shortness of breath, still experienced after taking long walks, is due rather to the diminished lung capacity of the right lung than to any cardiac weakness.

The patient has not had a roentgen-ray treatment for nearly a year, and for more than a year there has not been any evidence of hyperthyroidism.

REPORT OF A CASE SHOWING THE RELATION BETWEEN OCCUPATION AND A CERTAIN CASE OF BRONCHIAL ASTHMA.

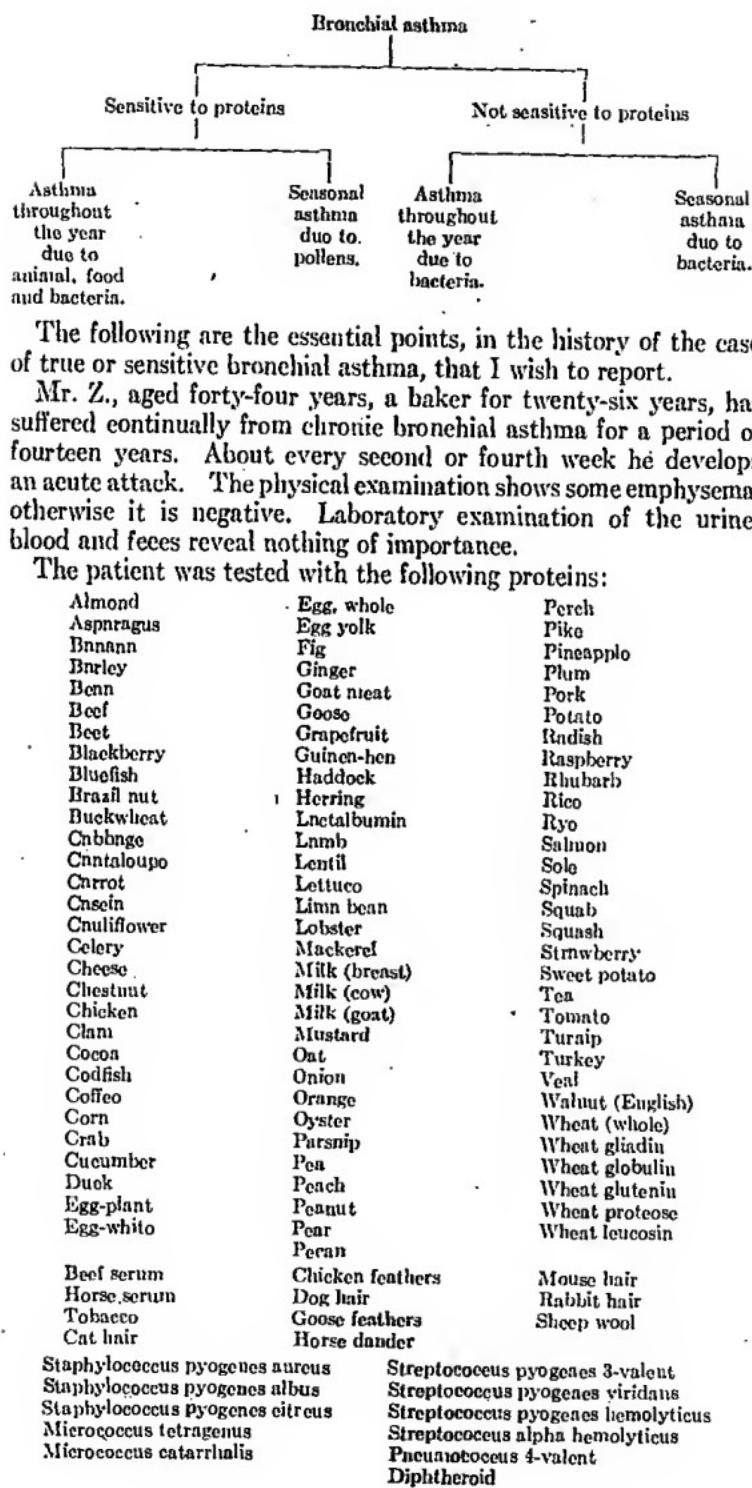
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It will be recalled that our present conception of bronchial asthma differs greatly from that previously held. We now know that by means of the cutaneous or skin test cases of bronchial asthma that are sensitive¹ to proteins may be separated from the non-sensitive type. The first class, or true bronchial asthma, is separate and distinct from the second, non-sensitive type, the so-called asthmatic bronchitis.

The following classification of Walker² presents this in an interesting way:

¹ For studies showing possible relationship of bronchial asthma to anaphylaxis and to the mimos see: Friedberger and Moreschi: Berl. klin. Wochenschr., 1912, xliv, 741. Oehme: Arch. Pharm., 1913, lxxii, 76. Buehr and Pick: Arch. f. exper. Path. u. Pharm., 1913, lxxiv, 41, 65. Meltzer: Jour. Am. Med. Assn., 1910, lv, 1021; Tr. Assn. Am. Phys., 1910, xxv, 66. Eustis: Am. Jour. MED. Sc., 1912, cxlii, 862; New Orleans Med. and Surg. Jour., 1914, lxvi, 730; 1909, lxi, 98. Eppinger and Gutman: Ztschr. f. klin. Med., 1913, lxxviii, 411. Dule and Laidlaw: Jour. Physiol., 1910, xli, 318; 1911, xl, 182. Pfeiffer: Ztschr. f. Immunitätsforsch. u. exper. Therap., 1911, xi, 133. Biedl and Kraus: Ztschr. f. Immunitätsforsch. u. exper. Therap., 1912, xv, 447. Schittenhelm and Weichard: München. med. Wochenschr., 1912, lix, 67. Aronson: Berl. klin. Wochenschr., 1912, xliv, 642.

² Bronchial Asthma, The Oxford Medicine, 1910, ii, 128.



On carrying out the cutaneous tests it was found that the only proteins he was sensitive to were *rye* and *wheat* and *wheat globulin*. Wheat leukosin, wheat proteose, wheat glutenin and wheat gliadin were all negative. The interesting fact is shown that this person is sensitive only to proteins of the rye and to wheat globulin, the other proteins of wheat not causing any reaction. We therefore have a case of a baker sensitive to the proteins of rye and wheat, proteins with which one may say he spends a great deal of time.

Cases showing the relation between occupation and bronchial asthma are not common. The following quotation from Walker³ is of interest in this connection:

"Occupation may have a direct bearing on the cause of bronchial asthma, and occupation frequently explains the development of sensitization after the age of forty. This occurrence, however, is not usual. Of 11 patients who became sensitive to proteins after the age of forty, 4 were bakers and sensitive to wheat protein, 1 was a hostler and sensitive to horse dandruff protein and 1 was a sifter of green coffee beans and was sensitive to green coffee protein, therefore in over half of these cases occupation was responsible for the cause of the asthma. Three unusual instances where occupation bore a direct relationship to the cause of the asthma are sufficiently interesting to mention. A man whose work consisted of sifting green coffee beans became sensitized to the proteins in the green husks and had asthma from the protein. Another man whose work was that of a jewel polisher became sensitive to the proteins in the dust from boxwood with which he polished the jewels, and a second man, working in the same room, became sensitive to the dust from the orangewood with which he polished jewels. The man sensitized to the boxwood was not sensitive to the orangewood, and *vice versa*."

As regards the treatment of these cases one can proceed in anyone of three ways: (1) The offending protein must be eliminated, that is, it must not be taken in the diet and the occupation must be changed so that the offending protein will not be inhaled. (2) If the protein is only offending on account of the ingestion of the same it can still be taken in the diet, but it must be only used after it has been subjected to a high heat. For example, it is known that patients who are sensitive to potato protein are usually able to eat baked potato, although boiled potato causes symptoms. Raw milk may cause symptoms in patients sensitive to milk protein, but boiled milk will not. Shredded-wheat biscuits and thin slices of bread well toasted on both sides may be eaten by patients sensitive to wheat protein, while the unheated wheat preparation would cause symptoms of ingestion. The explanation for these facts must be that the high temperature that the foods are subjected to destroys the anaphylactic properties of the protein contained in the same.

* Bronchial Asthma, The Oxford Medicine, 1919, ii, 128.

(3) Consists in treating or desensitizing the patient with those proteins that he has been found to be sensitive to by the skin or entaoeous test. One can give subcutaneous injections of the offending protein, but the procedure is difficult and not as satisfactory as the method of feeding the proteins. In this method gradually increasing doses of the offending proteios are fed until large amounts are taken without the production of symptoms. By this method of desensitization, Schofield,⁴ Rich,⁵ Schloss,⁶ Talbot,⁷ and Grover⁸ have had sucer ful results in children. Walker⁹ states that he has tried this method of treatment with adults, but none have been eonseientious enough to take the protein per schedule for any length of time.

EXPERIMENTAL CHRONIC SUPPURATIVE ARTHRITIS.

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ARTHRITIS has been a subjeet for experimentation over a period of years, and during this time the effect on the joints by many organisms has been studied. The green streptocoeei have probably been most extensively used, and have produced the most interesting findings, with not only local joint changes, but, in addition, alterations in the heart, arteries and kidneys, constituting a combination of lesions which simulated not a little those observed in the complex known as acute rheumatic fever.

The character of the joint reaction caused by the Streptococcus viridans is of a comparatively mild type, subsiding usually in a relatively short space of time, with a variable grade of disability of the joint. Of the other organisms, the one that bears the most interest is the hemolytic streptococcus, and I wish here to describe some observations made on rabbits treated with a member of this group.

The single strain of streptococcus used in these experiments was isolated on January 8, 1919, from the pus of an abscess in the submaxillary gland in a psychopathic patient who died eight days later of pneumonia. Permission for an autopsy was not granted. It may be stated, however, that during life the patient presented no evidence of bone or joint involvement. The organism in question was

⁴ Lancet, 1909, i, 716.

⁵ Jour. Michigan State Med. Soc., 1914, xiii, 649.

⁶ Am. Jour. Dis. Children, 1912, iii, 341.

⁷ Boston Med. and Surg. Jour., 1916, clxxv, 191.

⁸ Reported by Walker (*loc. cit.*).

⁹ *Loc. cit.*